

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

CORRECTED VERSION

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
12 August 2004 (12.08.2004)

PCT

(10) International Publication Number
WO 2004/067066 A1

(51) International Patent Classification⁷: A61M 5/145,
5/142

(21) International Application Number:
PCT/IL2004/000099

(22) International Filing Date: 2 February 2004 (02.02.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
154,243 2 February 2003 (02.02.2003) IL

(71) Applicant (for all designated States except US): SILEX
PROJECTS LTD. [IL/IL]; 12 Menorah St., 53489 Gi-
vatayim (IL).

(72) Inventor; and

(75) Inventor/Applicant (for US only): GENOSAR, Amir
[IL/US]; 1406 Centaur Circle, Lafayette, CO 80026 (US).

(74) Agent: WOLFF, BREGMAN AND GOLLER; P.O. Box
1352, 91013 Jerusalem (IL).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

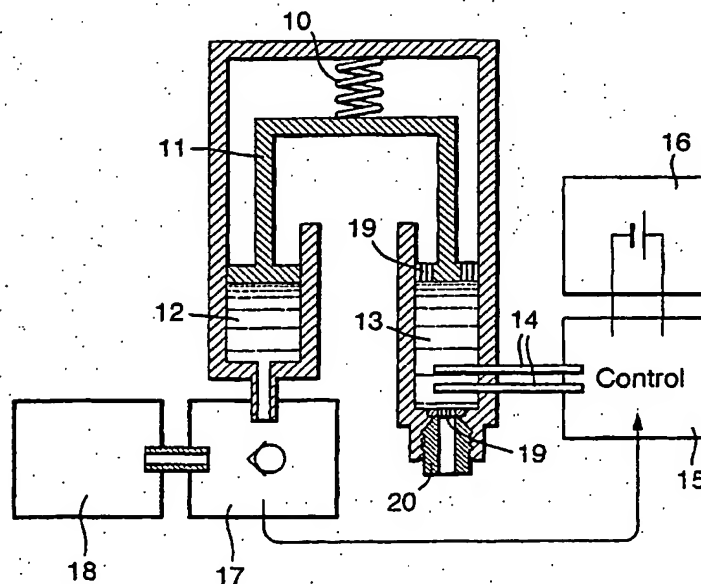
(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),
Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), Euro-
pean (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR,
GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK,
TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW,
ML, MR, NE, SN, TD, TG).

Published:

— with international search report

[Continued on next page]

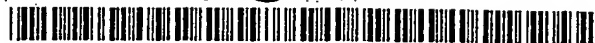
(54) Title: DRUG INFUSION DEVICE



(57) Abstract: The invention provides a drug delivery infusion device comprising an injection means (18) in fluid connection with a drug reservoir chamber (12) and pressure-generation means (10) coupled to both the drug reservoir (12) and to a liquid filled controlled chamber (13), wherein the coupling is such that the liquid filled control chamber (13) serves to constrain the motion of the pressure-generation means (10), thereby controlling the drug infusion rate, wherein the liquid filled control chamber (13) is associated with means for controlled depletion of the liquid therein whereby depletion of the volume of liquid in the control chamber enables the pressure-generation means to drive the drug in the reservoir chamber therefrom for infusion thereof.

WO 2004/067066 A1

THIS PAGE BLANK (USPTO,



(48) Date of publication of this corrected version:

10 September 2004

(15) Information about Correction:

see PCT Gazette No. 37/2004 of 10 September 2004, Section II

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

THIS PAGE BLANK (USPTO)

INTERNATIONAL SEARCH REPORT

International Application No
PCT/EP 04/000099

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 A61M5/145 A61M5/142

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
IPC 7 A61M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)
EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 413 238 B1 (MAGET HENRI J R) 2 July 2002 (2002-07-02) abstract	1
A	US 5 891 097 A (FUJITA YUKO ET AL) 6 April 1999 (1999-04-06) abstract	1
A	US 5 242 406 A (ZUCKER SHLOMO ET AL) 7 September 1993 (1993-09-07) abstract	1
A	US 2001/056259 A1 (LAMBORNE ANDREW N ET AL) 27 December 2001 (2001-12-27) abstract	1
	-/--	

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

- *T* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- *X* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- *Y* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- *Z* document member of the same patent family

Date of the actual completion of the international search

30 April 2004

Date of mailing of the international search report

12/05/2004

Name and mailing address of the ISA

European Patent Office, P.B. 5818 Patentlaan 2
NL - 2280 HV Rijswijk
Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,
Fax: (+31-70) 340-3016

Authorized officer

Nielsen, M

INTERNATIONAL SEARCH REPORT

International Application No

PCT/IL2004/000099

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2002/156464 A1 (HOOPER SANDRA MARIE ET AL) 24 October 2002 (2002-10-24) abstract paragraph '0043! - paragraph '0046!; figures 1,2A ----	1
A	US 5 858 001 A (GROSS JOSEPH ET AL) 12 January 1999 (1999-01-12) column 8, line 16 -column 11, line 35; figures 1-8 ----	1
A	DE 197 13 082 A (LRE TECHNOLOGY PARTNER GMBH) 1 October 1998 (1998-10-01) abstract ----	1
A	US 5 743 879 A (KRIESEL MARSHALL S) 28 April 1998 (1998-04-28) abstract -----	1

INTERNATIONAL SEARCH REPORT

International application No.
T/IL2004/000099

Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claims Nos.: 28
because they relate to subject matter not required to be searched by this Authority, namely:
Rule 39.1(iv) PCT - Method for treatment of the human or animal body by therapy
2. ☐ Claims Nos.:
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. ☐ As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/IL2004/000099

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 6413238	B1	02-07-2002	AU 6753600 A CN 1321096 T EP 1131117 A1 JP 2003509170 T WO 0121234 A1	24-04-2001 07-11-2001 12-09-2001 11-03-2003 29-03-2001
US 5891097	A	06-04-1999	JP 8058897 A	05-03-1996
US 5242406	A	07-09-1993	US 5090963 A AT 154517 T AU 638180 B2 AU 8997891 A CA 2057937 A1 DE 69126603 D1 DE 69126603 T2 EP 0494042 A2 IE 914394 A1 JP 8024334 A NZ 241218 A ZA 9110190 A AT 131388 T DE 69115431 D1 DE 69115431 T2 DK 481601 T3 EP 0481601 A2 ES 2080911 T3	25-02-1992 15-07-1997 17-06-1993 02-07-1992 01-07-1992 24-07-1997 18-12-1997 08-07-1992 01-07-1992 30-01-1996 27-09-1994 30-09-1992 15-12-1995 25-01-1996 02-05-1996 29-04-1996 22-04-1992 16-02-1996
US 2001056259	A1	27-12-2001	AU 2214600 A EP 1146922 A1 WO 0038767 A1 US 6348043 B1	31-07-2000 24-10-2001 06-07-2000 19-02-2002
US 2002156464	A1	24-10-2002	EP 1368079 A1 WO 02070047 A1	10-12-2003 12-09-2002
US 5858001	A	12-01-1999	AT 214954 T AU 1808797 A CA 2238614 A1 DE 69620257 D1 DE 69620257 T2 EP 0902696 A1 WO 9721457 A1 JP 2000515394 T ZA 9610374 A	15-04-2002 03-07-1997 19-06-1997 02-05-2002 07-11-2002 24-03-1999 19-06-1997 21-11-2000 23-06-1997
DE 19713082	A	01-10-1998	DE 19713082 A1	01-10-1998
US 5743879	A	28-04-1998	AU 6160796 A CA 2224124 A1 EP 0836505 A1 JP 11507260 T US 6030363 A US 5876377 A WO 9639220 A1 US 6063059 A US 5993421 A AU 704888 B2 AU 4414696 A	24-12-1996 12-12-1996 22-04-1998 29-06-1999 29-02-2000 02-03-1999 12-12-1996 16-05-2000 30-11-1999 06-05-1999 19-06-1996

INTERNATIONAL SEARCH REPORT

Information on patent family members

Int. Application No.

PCT/IL2004/000099

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 5743879	A	CA 2206734 A1	06-06-1996
		EP 0796121 A1	24-09-1997
		JP 10510450 T	13-10-1998
		WO 9616691 A1	06-06-1996

THIS PAGE BLANK (USPTO)